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HARVARD SCHOOL OF

DENTAL  
MEDICINE

1965-1966

*with an announcement  
for 1966-67*

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OF  
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MAIN ENTRANCE TO THE DENTAL BUILDING, LONGWOOD AVENUE, BOSTON



1965 — 1966

*with an announcement  
for 1966-67*

HARVARD SCHOOL OF  
DENTAL  
MEDICINE



*General Information  
and  
Announcement of Courses*

188 LONGWOOD AVENUE  
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## **Dental Education at Harvard University**

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**T**HE dental school established at Harvard University in 1867 was the ninth such school and the first university dental school in the country. From its inception it has been closely affiliated with the Harvard Medical School, which has been in existence since 1782. It is interesting to note that an invitation from the Medical School to a group of Boston dentists led to the formation of the school. On March 29, 1867, the medical committee gave the following reasons for this step:

“Dentistry has become with the past quarter of a century a most important art, a knowledge of which supposes not only mechanical skill, but a thorough acquaintance with the processes of dentition, physiologically and pathologically considered. Hence arises the necessity for a knowledge of the general principles of anatomy, physiology, surgery, chemistry, and materia medica, to which should be added some knowledge of the theory and the practice of medicine. A medical school already established is therefore the best place at which these various studies can be attended to.”

The present plan of education evolved from a reorganization of the Harvard Dental School in years just preceding World War II. The Harvard School of Dental Medicine offers a four year course which is fully approved by the Council on Dental Education of the American Dental Association and which leads to the Doctor of Dental Medicine degree. The aim of the program is to provide a broad background which will enable a graduate to move easily into general practice, advanced training for specialty practice, teaching or research.

A special feature of the program is that dental students take

courses with their medical colleagues in all the basic medical sciences: anatomy, physiology and biological chemistry in the first year, and bacteriology, general pathology, pharmacology, pathophysiology, medicine and surgery in the second year. During these two years, the Harvard medical and dental students usually meet as a combined class. The third and fourth years are almost wholly given over to clinical areas with the bulk of the time spent in the School clinics. Hospital teaching, which occupies a portion of the second year, continues through the clinical years with the emphasis placed on diagnosis and treatment of diseases of the oral cavity. Since 1955 the School has enjoyed a formal affiliation with the Forsyth Dental Center (formerly the Forsyth Dental Infirmary for Children). Senior Forsyth staff members hold Harvard appointments and contribute significantly to the teaching and research programs of the School of Dental Medicine. Students rotate through the dental clinics at the Massachusetts General, the Children's, the Peter Bent Brigham and Boston City Hospitals. In addition to its own staff and those of the Medical School and the teaching hospitals, the dental school draws for instruction upon the faculties of the Harvard School of Public Health and the science departments of the University in Cambridge.

Early in their careers students are introduced to the studies in progress at the School and at the affiliated institutions. Here the staff conducts investigations in growth and development, the mechanisms of oral disease and the basic science disciplines. Students are encouraged to take part in these activities and a thesis is part of the requirement for graduation.

Individual instruction, group conferences and seminars have replaced many of the lectures. In the School's clinic as well as in the hospital and laboratory, the small teaching groups allow individual supervision and flexible methods of instruction. Under this system the teaching can be adapted to the needs of the particular student, and he in turn can progress as rapidly as he assimilates course material.

With such rich opportunities open to him, it is literally true



that a student's own initiative is the largest determinant of just how much education he will acquire at the School of Dental Medicine. Whether he goes on to a specialty, general dentistry, or dental education and research, his background, which will be strong both in basic sciences and in clinical dentistry, will provide him with excellent credentials. The recipient of the degree of D.M.D. from the Harvard School of Dental Medicine is eminently qualified to meet the challenge of dentistry in the future.

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CLINIC, HARVARD SCHOOL OF DENTAL MEDICINE



HARVARD MEDICAL SCHOOL

FORSYTH DENTAL CENTER





# **General Information**

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## **Buildings**

The Dental Building on Longwood Avenue contains the Office of the Dean, the Dental Clinic, Dental Library, lecture and conference rooms, and research laboratories. Also included are individual laboratories for fellows in training, animal quarters, controlled temperature rooms, electron microscopes and laboratory areas for studies involving use of radioactive materials. The Clinic facilities consist of a main clinic with thirty-two chairs, each with instrument cabinet and chair-side bench equipped for general dentistry; a dental laboratory, technique laboratory and preparation room; a dental surgery clinic with two chairs and recovery room; and an X-ray and photography clinic with two chairs. High-speed air turbine handpieces and medium speed rotating instruments are available for use by all students.

Next door are the five large buildings of the Medical School. Building A (Administration) contains the administrative offices of the Medical School, and the Warren Museum. Building B accommodates the Departments of Anatomy and Pharmacology. Building C provides space for the Departments of Physiology and Biological Chemistry. Building D is occupied by the Departments of Bacteriology, Pathology, Preventive Medicine, and also laboratories of the Department of Medicine. Building E houses the Departments of Legal Medicine and Tropical Public Health.

## **Affiliated Institutions**

*The Forsyth Dental Center*, located at 140 The Fenway, became affiliated with the School of Dental Medicine in 1955. In addition to the large general clinic there are services in orthodontia and pediatric dentistry, and research facilities in bacteriology, biochemistry, physiology, histology and anthropology.

*The Massachusetts General Hospital.* This is a general hospital founded in 1811 and ever since associated with the Medical School. There are services in medicine, dentistry, surgery, pediatrics, dermatology, genito-urinary diseases, orthopedics, gynecology, neurology, neurosurgery, anesthesia, and psychiatry, all of which are used in giving instruction in these special subjects in the Schools of Medicine and Dental Medicine.

*The Children's Hospital* is located on Longwood Avenue adjacent to the Medical School. This is a generalized hospital for the care of the younger age group. The hospital maintains pediatric, surgical, neurosurgical, dental, orthopedic, radiologic, psychiatric, and pathological services with their associated specialties. All services are available for teaching purposes.

*The Peter Bent Brigham Hospital*, equipped for teaching in physical diagnosis, medicine, surgery, radiology, pathology and dentistry, is situated on grounds adjacent to the Medical School buildings. The chiefs of services are members of the Faculty of Medicine. Also located within the hospital are the offices of the Medical Area Health Service.

*The Boston City Hospital* is a 1500 bed municipal hospital with the largest outpatient department in the city. Teaching services in medicine, surgery, neurology and radiology are affiliated with the University. The hospital maintains an active oral surgical service which is available for teaching purposes.

Hospitals used for teaching in the second year include the Massachusetts General Hospital, the Children's Hospital, the Boston City Hospital, the Peter Bent Brigham Hospital, the Beth Israel Hospital, Boston Lying-in Hospital, the New England Deaconess Hospital, the Free Hospital for Women and the South Huntington Avenue Veterans Hospital. Further description of all these hospitals will be found in the combined catalogue of the Medical School and the School of Dental Medicine.

## ***Libraries***

The School of Dental Medicine Library, located on the main floor of the School building, contains the working collection which is



maintained for the convenience of students and faculty. Its holdings are selected in terms of the needs of its defined clientele. It has facilities for 50 readers and is open from 9 A.M. to 5 P.M. weekdays and 7 to 10 P.M. Monday through Thursday evenings.

The comprehensive library resources are in the nearby Francis A. Countway Library of Medicine which serves the School of Dental Medicine, the Medical School and the School of Public Health. The Countway Library opened its doors to readers in May, 1965, and combines the resources of the Harvard Medical Library with those of the Boston Medical Library. It contains 412,000 volumes and receives currently more than 4,000 different periodicals, and is the largest university-centered medical library in the country. The Countway Library is open 8 A.M. to 11:30 P.M. weekdays, 9 A.M. to 5 P.M. Saturdays, and 2 to 6 P.M. Sundays.

In addition to its holding of current books and periodicals, the Countway Library has extensive collections of historical materials, dating from the 15th century. Its History of Medicine Department provides modern facilities for the effective use of these books and other rarities.

A second special dental library is that at the Forsyth Dental Center, which supplements the School Library. There are also a number of important convenience collections in the medical quadrangle, notably the Anatomy Library (Building B2-220) and the Bowditch Library of Physiology and Biological Chemistry (Building C-321).

All members of the University may borrow from the College Library in Cambridge and daily messenger service is provided from the College Library and various other University libraries.

Students of the School have privileges at other Boston area libraries, including that of the Massachusetts Institute of Technology and the Boston Public Library.

## ***Requirements for Admission***

Candidates for admission to the first-year class must present evidence satisfactory to the Committee on Admission, not simply that they have passed the courses necessary to fulfill the requirements, but also that their college work and other credentials have been of such character as to give promise of work of high quality in the dental course.

Outstanding students may, in selected cases, be considered acceptable for admission after only two years of college work. Excellent students with three years of preparation are accepted, but in practice, the Committee recommends four years of college. The final judgment concerning admission of any student always rests with the Committee on Admission. Inability to finance a dental education should not be a deterrent to application since the resources of the School are sufficient to cover justifiable need.

In general, the School considers for admission to its classes students in good standing in arts or in sciences in colleges listed as approved in the *Higher Education Directory*, published by the Office of Education of the U.S. Department of Health, Education, and Welfare.

Applications may be obtained at the Dean's Office after June 1 of the year preceding the expected date of admission. Applications will not be considered from candidates who have been refused admission on two prior occasions or who have applied to the Harvard Medical School.

In accordance with the policies of the American Association of Dental Schools, no provisional or final acceptance for admission will be given before November 1 of the academic year prior to matriculation. After being given an acceptance, the applicant will be allowed a waiting period of at least 30 days. After April 15, the waiting period will be at the discretion of the School.

### **Required Courses**

Listed below are the minimum college credits which must be secured to insure adequate preparation for graduate study and to meet present legal requirements of state licensing boards. Credit achieved through the College Entrance Examination Board Advanced Placement Program will be accepted as meeting the minimum requirements, but students are urged to take advanced work in those areas.

*Biology:* The student must take at least one year of biology which includes adequate laboratory work. The combination of one semester of zoology and one semester of botany is acceptable, but bacteriology, human anatomy and histology will not be considered as meeting the biology requirements. A satisfactory course should show college credits of at least eight semester hours.

*Chemistry:* The student should acquire a sound understanding of the basic principles of chemistry, both inorganic and organic. He must have taken not less than 16 semester hours of chemistry, which should be about equally divided between inorganic and organic chemistry. Biochemistry will not be accepted as part of these requirements.

To be adequately prepared for the work in chemistry in the dental school, the student should have experience with the application of chemical laws to gases and solutions, as well as some familiarity with analytical techniques.

*Physics:* The student should acquire an understanding of the general principles of physical laws and phenomena and have experience in mechanics, heat, light, sound and electricity. College credit for eight semester hours should be secured.

*English:* The student is required to complete one year or the equivalent at the college level even though advanced credit has been received.

*Mathematics:* The student is required to take a one year course in calculus unless it has been taken in high school.

### **The Dental Aptitude Test**

The Dental Aptitude Test is a requirement for admission to this school. It is administered in October, January and April. Preferably the test should be taken at least ten months prior to the expected date of matriculation. Application blanks may be secured from the Division of Educational Measurements, Council on Dental Education, American Dental Association, 211 East Chicago Avenue, Chicago, Illinois, 60611.

### **Interviews and Faculty Evaluation**

Appraisal of the applicant by members of his college faculty is an important part of the evaluation of each candidate. If the college has a predental or premedical advisory committee their composite evaluation must be submitted. In the absence of such a committee two evaluation forms should be submitted by senior faculty members, at least one of whom should be in a science department. Interviews

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may be required of any applicant and may be arranged at places convenient to the candidate.

### **ADMISSION TO ADVANCED STANDING**

The third year class may be increased by a small number of transfer students who have completed the equivalent of the first two years at the Harvard School of Dental Medicine. No students may transfer to the fourth year class without a special vote of the Faculty in each instance. Only students of high scholastic standing will be considered. Applicants for transfer will be required to take the first part of the National Board Examination in either dentistry or medicine. Applicants holding a degree from a dental school not accredited by the American Dental Association will be required to take the Science Achievement Test administered through the Council on Dental Education of the American Dental Association. They must be recommended as promising candidates by the Dean of the school from which they come. Full credit for work done elsewhere will usually be allowed but in certain cases additional work may be required. Ordinarily such requirements can be completed during the summer recess preceding transfer.

### **ADMISSION FOR SERVICEMEN**

The Harvard School of Dental Medicine welcomes inquiries regarding future applications from men who are now on active duty with the armed forces. The qualifications for admission remain essentially the same for veterans as for civilian applicants. Before the acceptance of a veteran can become final, the applicant will need to submit photostatic copies of discharge papers or similar evidence of honorable release. Where available the applicant should file also a copy of his "Separation and Qualification Record" on which is listed in detail his service record and training. If the Committee does not act favorably on an application, certifications furnished by the applicant may be returned at his request.

For matters relating to veterans' affairs and not connected directly with the School of Dental Medicine, the applicant should feel free to write to Veterans' Affairs, Comptroller's Office, Holyoke Center, Cambridge, Massachusetts, 02138.

## General Regulations

*In order that the time of study shall count as a full year, students must register on the date specified.* All students will be notified during summer recess of the exact time and place of registration.

*A fee of \$10 is charged for late registration.*

### Promotion Boards

*First and second year students.* Promotion Boards for the first and second years are composed of representatives from each department in the Medical School responsible for grading the student, plus the Dean and Associate Dean of the School of Dental Medicine for Student Affairs, who are non-voting members. Promotion from one class to another is contingent upon the satisfactory completion of the required work of each year. In each course, when indicated, students will be informed by their instructors as early as possible when the progress of their work is unsatisfactory. Opportunity will be given to students to appeal the decision of a Promotion Board either at a special meeting or at the next regular meeting of the Board. Appeals must be sent to the Chairman of the Promotion Board, Harvard Medical School, and to be valid, be received by him within two weeks after the issuance of a Promotion Board's notice of formal action.

*Third and fourth year students.* The Promotion Boards in the School of Dental Medicine are composed of staff members representing the various divisions of dental teaching. The duties consist of evaluating unsatisfactory student performance and acting to correct such performance. The Boards will be guided by the following general rules:

A student who fails two major courses may be asked to withdraw from school or repeat the year. A student who fails one major course and whose average for the other courses is *D* will be asked to repeat the year's work or withdraw from school. A student whose average for the year's work is *D*, at the discretion of the Promotion Board, may be asked to withdraw from school, to repeat the year's work, or be promoted on probation. A student whose progress is unsatisfactory at any time throughout the school year may be placed on probation. A probation can be removed only if the student demonstrates satisfactory improvement. A student on probation will not be eligible for



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promotion. A student repeating a year must take all major courses. He may be excused from other courses at the discretion of the department head. He must demonstrate satisfactory improvement in each major course in order to be considered for promotion or graduation.

### Examinations

Final grades in each course will be based upon such examinations or other tests as are determined by each department. Grading is on the scale of A, B, C, D, and E (denoting failure).

A subcommittee on examinations will give a *comprehensive oral examination* at the end of the senior year and assign a mark for performance in this examination.

The Committee on Examinations will recommend to the Faculty





of Medicine, of which the School of Dental Medicine is a part, those who pass and are otherwise qualified for the degree and for honors.

### **Withdrawal from the School**

The Faculty reserves the right to require the withdrawal of any student at any time when, in the opinion of his instructors, he is not competent to pursue his assigned course of study, or if the Faculty of Medicine determines that he is for any reason unfit to continue as a student in the School. In addition, any student who is absent without leave from scheduled courses for more than a total of 30 days during the academic year will be required to withdraw from the School.

A student may withdraw voluntarily from the School upon application to the Dean. Application for reinstatement by any student must be received in writing at least four months prior to the date of readmission and for favorable action must be approved by the Committee on Admission.

*For additional regulations see the combined catalogue of the Schools of Medicine and Dental Medicine.*

## **Degree of Doctor of Dental Medicine**

Every candidate for the degree of *Doctor of Dental Medicine* at Harvard University must be at least twenty-one years of age and of good moral character. He must have fulfilled all the requirements for admission to this school and give evidence of having studied at least two full years in basic health sciences comparable to those offered in the first two years of this school and two years in a recognized dental school, of which one year must be spent in the regular fourth year course of the Harvard School of Dental Medicine. He must have passed all the required examinations and have satisfactorily completed the minimum requirements for work in the various laboratories and clinics.

The degree of Doctor of Dental Medicine *cum laude* or *magna cum laude* may be given to students of highest general rating in the class on recommendation of the Committee on Examinations. The degree is also awarded, where appropriate, with honors for a thesis in a special field.

Application for the D.M.D. degree, on a form provided by the Dean's Office, must be filed at that office prior to April 1 in order for the student's name to be placed on the list of degree candidates at Commencement.

## **Dormitory**

Vanderbilt Halls, the student dormitory, has accommodations for 305 men and 20 women medical and dental students. The majority of the rooms are designed for one occupant, but there are also a number of suites for two or more persons. The price of rooms ranges from \$260 to \$505 for the academic year. Application forms for rooms in Vanderbilt Halls will be sent to all new students approximately four months before registration day. Students are permitted to re-engage their rooms for the following year by signing lease cards at the Medical School Dean's Office. The dormitory has squash courts and a gymnasium which are open to members of the teaching staff and students of the School of Dental Medicine and the Medical School. In addition the Schools have tennis courts and an outdoor exercise field.

The Schools own a parking lot for automobiles behind the hall. No charge is made for this facility, and the Schools assume no responsibility for loss or damage to automobiles or other property left in the lot.

The dormitory dining hall is open for all members of the Schools. *First year students* living in Vanderbilt Halls will be required to pay *full board* for 21 meals a week throughout the academic year (\$670). Second year students living in Vanderbilt Halls will be required to pay full board in the first term but in the second term compulsory meal contracts may be amended to provide for absence from lunch during the three clinic days of each week. A proportionate decrease in the full board rate will be made for the period involved.

Apartments for married students may be found close to the School. University housing in Cambridge is available for married students.

## **Student Health Service**

The Harvard Medical Area Health Service at the Peter Bent Brigham Hospital, 721 Huntington Avenue, supplies medical care to the

students. The clinic is open daily except Saturday afternoons, Sundays and holidays from 8:30 A.M. to 5:00 P.M.; office hours for the physicians are 8:30 to 10:00 A.M. and 1:00 to 2:00 P.M. However, one of the staff is available during the day by appointment. For emergency care at night and on holidays, the Emergency Service of the Peter Bent Brigham Hospital is open at all times, and one of the staff of the Clinic is available by telephone.

Dental students with minor illnesses requiring rest in bed, as well as more serious cases, will usually be hospitalized at the Peter Bent Brigham Hospital. Upon registration, each student receives a booklet which describes the medical services available under the Health and Medical Care Program for Students. Hospital insurance is available through the plan for wives and children of married students.

Any illness necessitating absence from classes must be reported to the Health Service.

Each student who is accepted for admission must submit, on a form supplied by the Dean's Office, a certified statement of successful vaccination within three years prior to registration. A complete medical examination of each new student is required at the beginning of the school year. This is conducted by appointment shortly after school opens.

## ***Fees and Expenses***

Ample scholarship and loan funds are available to cover all costs of dental education, when the need exists.

The fees are: — For matriculation, \$5; for medical health fees, \$74 for each year; for instruction (including laboratory charges except microscope rental, breakage, damage and loss of apparatus), \$2,000. Term bills are issued approximately every two months.

Microscopes are available for rental each year. During the third and fourth year, students rent a set of dental instruments from the School for a nominal fee, which may vary according to the value of the instruments.

All indebtedness to the University must be paid by all candidates for degrees at least one day before Commencement.

Any student whose indebtedness to the University remains unpaid on the date fixed for payment is deprived of the privileges of the

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University until he is reinstated by consent of the Dean, after payment of all indebtedness. A fee of \$10 is automatically added to all bills which are unpaid by the due date. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw.

# **Financial Aid**

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Harvard School of Dental Medicine is fortunate in having substantial financial assistance available to its students. Scholarships are awarded on the basis of academic excellence, financial need, or a combination of factors. Loan funds are available to all students who show suitable need and whose other financial obligations do not make it improbable that this loan will be repaid. Application for financial aid may be made at any time to the Associate Dean for Student Affairs.

## **SCHOLARSHIPS**

JOANNA ALFORD BEQUEST (1785). Mrs. Joanna Alford. To be used for scholarships for those students who are under low and indigent circumstances.

LAWRENCE WILLS BAKER (1956). Friends of Lawrence Wills Baker, D.M.D. 1898. A scholarship for a student who has shown aptitude and interest in the field of orthodontics.

DWIGHT M. CLAPP (1926). Clara Josephine Clapp, in memory of her husband, Dwight M. Clapp, D.M.D. 1882. For the education of a male student born in Massachusetts, preferably one who has a college education or training of a classical character.

DENTAL SCHOOL ALUMNI SCHOLARSHIP (1937). Gift of the Class of 1912.

THOMAS ALEXANDER FORSYTH (1929). Thomas Alexander Forsyth. Scholarship to two deserving men, awarded continuously until they have completed the course.

GENERAL SCHOLARSHIPS. A portion of General University Funds is available for dental students. Recipients are chosen by the Committee on General Scholarships on the recommendation of the Dean.

HARVARD DENTAL ALUMNI (1949). Selection of a candidate shall be based upon character, scholarship, and promise within the field of dentistry. The award may be offered as a scholarship to an undergraduate student of the third or fourth year or as a fellowship for graduate work.

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HARVARD SCHOOL OF DENTAL MEDICINE NATIONAL SCHOLARSHIP (1960). Awarded to one or more members of each class entering the School of Dental Medicine. The selection of recipients is based on academic promise without reference to financial need. The amount of the stipend, however, is in proportion to the student's actual necessities, except that a certain minimum award is granted to all prize scholars. Each student accepted by the Committee on Admission is considered as a candidate for a National Scholarship. *An individual application cannot be made.* The prize scholarship is awarded for one year. If the student maintains a satisfactory record, the scholarship will be renewed annually.

FRANK RANDALL McCULLAGH (1964). Bequest of F. R. McCullagh, D.M.D. 1902, to assist worthy and indigent students to finance themselves through their dental training.

EUGENE HANES SMITH (1920). Alumni Association. To be awarded to a third or fourth year student who has been a student in regular standing during the first and second years.

PETER E. STRAUSS (1922). Emily R. M. Strauss, in memory of her husband.

JOHN E. THAYER SCHOLARSHIP (1857). Bequest of John E. Thayer, the income to be paid to the best scholar having financial need in each school of Harvard University.

CLARENCE B. VAUGHN (1965). Bequest of C. B. Vaughn, D.M.D. 1897, to aid worthy and desirable students in acquiring and completing their education in dental medicine.

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The Committee on General Scholarships administers the following preferential scholarships, which are available to all students in the University. Specific application must be made to the Dean's Office early in February, unless otherwise stated, for any one of these awards.

JOHN AUSTIN AMORY, CLASS OF 1907, SCHOLARSHIP FUND (1954). Gift of Roger Amory, Class of 1910, to establish "the John Austin Amory, Class of 1907, Scholarship Fund . . . to provide one or more scholarships for candidates for a degree in any college or graduate school of the University." Under certain conditions a grandson by male line of John Austin Amory, '07, may be entitled to the income.

BAXENDALE SCHOLARSHIP (1928). Bequest of Esther M. Baxendale.



Preference: (1) descendants of Alan Bedford Hudson; (2) students of the name of Baxendale or Hudson; (3) students from Brockton or Bourne, Mass.

**BRIGHT LEGACY (1880).** Bequest of Jonathan Brown Bright. For descendants of Henry Bright, Jr., of Watertown, Mass., who bear the name of Bright, registered in any department of the University.

**DANIEL A. BUCKLEY BEQUEST (1905).** Bequest of Daniel A. Buckley of Cambridge, Mass. For needy and worthy graduates of Latin, High and other public non-sectarian schools in Cambridge.

**GODFREY L. CABOT, INC. SCHOLARSHIP FUND (1955).** For scholarships and grants of "aid" for students in any department of the University. A son of an employee of Godfrey L. Cabot, Inc. or of its subsidiary and associated companies, who applies for aid or a scholarship, may be preferred in the awards from this fund.

**MADAME MARGUERITE CARRIÈRE FELLOWSHIP FUND (1959).** Residuary bequest of Louis A. Freedman in memory of his wife. The fellowship is to be awarded in alternate years to a graduate student at Harvard University for study in France and to a French graduate student for study at Harvard University. It is hoped that the aim of the American student in France will be to study the French traditions and attitude so as to better understand and explain the French reaction to the problems that concern both countries and that similar aim will guide the French student in America.

**VICTOR EMANUEL CHAPMAN MEMORIAL (1957).** Several donors. In memory of Victor Emanuel Chapman, A.B. 1913, killed in World War I. For a French youth (or youths) for study in any department of Harvard University. Applications should be made through the Institute of International Education, 800 Second Avenue, New York, New York 10017, before *February 1*. A student already enrolled at Harvard should, however, apply through the Dean's Office.

**JOSEPH HODGES CHOATE MEMORIAL (1919).** Gift of the Harvard Club of New York City in memory of Ambassador Joseph Hodges Choate, A.B. 1852. Awarded upon the nomination of the Vice-Chancellor of the University of Cambridge, England, to a British subject coming from that University to study in any department of Harvard University.

**GEORGE CHASE CHRISTIAN MEMORIAL SCHOLARSHIPS (1936).** Gift of Carolyn McKnight Christian in memory of her husband, George Chase

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Christian, A.B. 1895. To be awarded as National Scholarships to residents of Minnesota, for study in Harvard University, preferably the graduate schools.

MARK D. CORY SCHOLARSHIP (1954). Residuary bequest of Mark D. Cory. To be awarded to a worthy graduate of the Gadsden High School, Gadsden, Alabama, to be selected and designated by the faculty of said high school. Available for students in any department of the University.

CHARLES DOWNER SCHOLARSHIP FUND (1927). Bequest of Charles Downer, A.B. 1889, LL.B. 1892. For students in any department of the University in the following order of preference:

- A. Students of "English or Anglo-Saxon stock" who bear the family surname of Downer by right of birth or inheritance, and not because of adoption, preference to be given to such students who are descendants of Joseph and Robert Downer, of Wiltshire, England, who came to America about 1650. Scholarship awards under this category will be sufficient to pay for tuition, books, food, room and other incidentals in any academic year.
- B. Descendants of members of the Harvard College Class of 1889 who are in need of assistance.
- C. Residents of the State of Vermont, preference to be given to those most worthy of assistance.
- D. Students worthy of assistance and of high scholarship, preference to be given to (1) Descendants of graduates of Harvard College, and (2) Those "of that old Anglo-Saxon stock which has gone forth from New England into all parts of the United States and has been the means of giving strength and stability and character to our government."

Or, any balance of income remaining after the award of scholarships as specified in paragraphs A, B and C above may be used for fellowships for Harvard graduates of high scholarship and of rare and unusual ability who are pursuing special work either at Harvard or at any American or foreign university or school.

DWIGHT D. EISENHOWER SCHOLARSHIP FUND (1962). Gift of William A. Hinton in memory of Augustus and Maria Hinton, "the income to be used in any department by way of scholarship grants, prizes for scholarly treatises or other achievements, or otherwise."

JEAN GAILLARD MEMORIAL FELLOWSHIP (1946). Established in memory of Jean Gaillard, a student of the Ecole Centrale des Arts et Manufactures in Paris, who served as an Aspirant in the French Air Forces, was arrested by the German Gestapo, and died in the German concentration camp at Ravensbrueck April 16, 1945, a victim of Nazi inhumanity. For French youths for study in any department of Harvard University or of the Massachusetts Institute of Technology. The incumbents from year to year are to be nominated by the Board of Directors of the Ecole Centrale des Arts et Manufactures in Paris.

LEWIS AND HARRIET HAYDEN SCHOLARSHIP FOR COLORED STUDENTS (1894). Residuary bequest of Mrs. Harriet Hayden. Open to colored students in the Medical School, the School of Public Health, and the Dental School.

CHARLES W. HOLTZER FELLOWSHIPS (1929). Bequest of Charles W. Holtzer. For young men of German birth who have received their preliminary education in German institutions of learning, to study in any department of the University. Preference is given to students in Germany at the time of application. Students in Germany may apply either through the Deutscher Akademischer Austauschdienst, Nassestrasse 11, Bonn, or the Institute of International Education, 1 East 67th Street, New York 21, New York, *before February 1*. Students enrolled at Harvard should apply through their Schools. Documentary proof of German birth and education required.

FRANK KNOX MEMORIAL (1946). Gift of Annie Reed Knox in memory of her husband, Col. Frank Knox, LL.D. (Hon.) 1942, Secretary of the Navy, 1940-44. "It is my hope that this fund . . . will play a part in an integrated program of exchange fellowships throughout the world. The Frank Knox Memorial is established because of the firm belief of my dear husband, a conviction which I share, that cooperation between the British Commonwealth and the United States of America, based upon an informed and understanding contact of the peoples of these two great countries, is an essential to international peace." Candidates shall be selected on the basis of future promise of leadership, strength of character, keen mind, a balanced judgment and a devotion to the democratic ideal. Fellowships are awarded annually to:

1. Students coming from one of the following British Commonwealth countries: United Kingdom, Australia, New Zealand and

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Canada. Students should apply through their university *before November 1* of the year preceding award.

2. Recent graduates of Harvard College, or students who have completed at least one year of study in one of the Harvard graduate schools, for study in any one of the countries listed above.

LINCOLN SCHOLARSHIP (1876). Residuary bequest of Miss Levina Hoar. Preference: needy and worthy students from Lincoln, Mass.

FREDERICK E. PARLIN FUND (1928). Bequest of Albert Norton Parlin. Preference: natives of Malden or Everett, Mass.

WILLIAM PENNOYER BEQUEST (1670). Bequest of William Pennoyer of England, for two fellows and two scholars; one preferably to be a descendant of Robert Pennoyer (a brother of William) and the other . . . [from] . . . New Haven [Colony]. Preference to be given to undergraduate descendants. Pennoyer descendants in the graduate schools may apply for the Pennoyer Scholarship by filing such application directly with the College Admission and Scholarship Committee. Certified genealogical records required to establish claim.

ARISTIDES EVANGELUS PHOURIDES MEMORIAL (1925). Friends of Aristides Evangelus Phourides, A.B. 1911, Ph.D. 1915. Available for student of Greek birth or of Greek parentage in any department of the University.

PRINCETON FELLOWSHIP (1910). Gift of Cleveland H. Dodge. Preference: a graduate of Princeton University, for his first year of study only, in one of the graduate departments of Harvard University. Applications should be made to the Dean of the Graduate School of Princeton University before *January 20*.

LEON W. REDPATH SCHOLARSHIP (1938). Bequest of Mrs. Ellis W. Redpath in memory of her son, Leon W. Redpath, A.B. 1898. For deserving students from the state of Ohio, with preference to students from Stark and Tuscarawas Counties.

FRANKLIN REYNOLDS FUND (1925). Residuary bequest of John F. Reynolds. For students who are natives of Marblehead, Mass.

JAMES A. RUMRILL SCHOLARSHIPS (1909). Gift of Anna Chapin Rumrill in memory of her husband, James Augustus Rumrill, A.B. 1859. For a properly qualified graduate of a college or university in

Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee, or Kentucky, who has been admitted as a first year student in one of the graduate departments of Harvard University.

PETER BROOKS SALTONSTALL '43 MEMORIAL (1947). Established by Senator Leverett Saltonstall in memory of his son, Peter B. Saltonstall. To assist a worthy student from the Hawaiian Islands and those islands west of Hawaii, including New Zealand, the Fiji Islands and Australia, and also Japan, South Korea, Hong Kong, Formosa, the Philippine Islands, Vietnam, the East Indies, Indonesian Islands, Sumatra and Thailand. The purpose of this memorial is to further the education, the health and welfare of the peoples inhabiting the above named regions of the far Pacific. Applications due *February 1*.

ERNEST FREDERICK SLATER SCHOLARSHIP (1955). Bequest of Ernest F. Slater. The income to be awarded as scholarships in any department of Harvard University to deserving (financially or otherwise) young men who are qualified residents of (a) the city of Orangeburg, South Carolina; (b) the state of South Carolina; preference to be given descendants by birth or adoption of Edward Frederick Slater regardless of their residence. No scholarship will be awarded to students in their first year at the University.

CHARLES H. SMITH BEQUEST (1947). Residuary bequest of Charles H. Smith. For awards to students in any department of the University according to the following order of preference:

1. a. Graduates of public high schools in Providence, Rhode Island, who are of scholarship rank.
- b. Graduates of public high schools in Providence, Rhode Island, who are below scholarship rank but who are considered eligible for financial aid.
2. Graduates of other (non-public) secondary schools in Providence, Rhode Island, who are of scholarship rank.
3. Any residents of Rhode Island not indicated above who are of scholarship rank.

WILLIAM STOUGHTON BEQUEST (1701). Bequest of Lieutenant Governor William Stoughton, A.B. 1650. Preference: (1) students from Dorchester or Mattapan, Mass.; (2) students from Milton, Mass.; (3) any needy and deserving student.

AUGUSTUS CLIFFORD TOWER (1927). Gift of Mrs. Augustus Clifford



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Tower. To be awarded annually to a French student for study in any graduate department of Harvard University and to a graduate of Harvard College who may be either a graduating senior or a student enrolled in one of the graduate departments of the University for study in a French university, preference to be given to a student of Anglo-Saxon descent.

JENS AUBREY WESTENGARD FUND (1954). Bequest of Rebecca Aubrey Westengard. "The income is to be applied . . . to the further education of students of promise and standing in any department of the University by providing them with facilities for further education in Europe, Britain or South America, by travel or study, or to the further education of students of promise and standing in any of those countries, by providing them with facilities for further education by travel and study in this country, preferably by study in some department of Harvard University."

1902 WORLD WAR MEMORIAL (1923). Gift of Class of 1902, in memory of their classmates, André Cheronnet-Champollion, Edward Ball Cole and Elbert Walker Shirk. Preference: deserving descendants of the members of the Class of 1902. Open to students in any department of the University, with preference to undergraduates.

*The scholarships of the present are the result of the generosity and faith of members of a former generation. Current recipients of scholarships have an opportunity to render a service to future generations by refunding at some time after graduation a part or all of the scholarship money they have received.*

## LOAN FUNDS

AMERICAN DENTAL ASSOCIATION — FUND FOR DENTAL EDUCATION DENTAL STUDENT LOAN FUND (1962). Established by the Fund for Dental Education through a grant from the American Dental Association. Available without restrictions to incoming and enrolled students.

THE CHRISTIAN SOLDIER FUND (1925). Established by Miss Caroline F. Anderson for promising dental students. The loan carries no interest but the recipient must sign a note obligating him to repay the loan not later than five years from the date of the note.

DENTAL ALUMNI LOAN FUND (1927). Established and maintained by the Dental Alumni Association for financial aid to worthy students.



LUCINDA DAVIS FERNALD FUND (1936). A small fund, the gift of Adelbert Fernald, D.M.D. 1896, to be loaned to deserving New England-born students of good character.

HEALTH PROFESSIONS STUDENT LOAN FUND (1963). A fund established through a matching Federal contribution under the provisions of the Health Professions Educational Assistance Act of 1963. Preference is given to students who entered the first year after June 30, 1963.

INTERNATIONAL COLLEGE OF DENTISTS (U.S.A. SECTION) STUDENT LOAN FUND (1962). A revolving loan fund established by the U.S.A. Section of the International College of Dentists to help meet the needs of senior dental students.

ROBERT T. MOFFATT FUND (1925). A small fund from various contributors in memory of Robert T. Moffatt, D.M.D. 1895, for the benefit of needy and deserving students.

SCHOOL OF DENTAL MEDICINE LOAN FUND (1953). An appropriation from the School's funds to establish additional loan money for needy students.

SCHOOL OF DENTAL MEDICINE REVOLVING LOAN FUND (1952). Recognizing the need for student loan money in the School, the President and Fellows of Harvard College authorized an appropriation to establish this fund.

Loans shall bear no interest until July 1 three years after the borrower's graduation from the school. Thereafter, loans shall bear interest at the "going Federal rate" in effect at the time the loan was made. For the fiscal year, 1965-66, this rate has been set at 4¼ per cent. Any change in the rate will be announced annually on or before July 1.

The principal and interest are to be repaid over the ten-year period that begins three years after graduation from the School. The period of payment may be deferred for three years of military service and/or three years in the Peace Corps.

Payment may be made in equal or graduated installments with the right of the borrower to accelerate payments.

If the student borrower leaves the School prior to graduation, the interest on his loan shall begin to accrue on the date of his separation from the School.

## STUDENT EMPLOYMENT

A limited amount of outside work can be done without taxing the student's health and scholarship. The Dean's Office makes an effort to assist students in obtaining part-time work during the college year and full-time work during the summer vacation.

## *Prizes*

HARVARD DENTAL ALUMNI PRIZES (1953). The Harvard Dental Alumni Association annually makes several awards for scholastic excellence.

HARVARD ODONTOLOGICAL SOCIETY (1949). The Harvard Odontological Society each year presents a Certificate of Merit to the best Senior Seminar Essayist of that year. This senior is selected by the Awards Committee of the School of Dental Medicine.

DR. GRACE MILLIKEN (1950). An award given annually when practicable, but at least once in three years, for an outstanding essay on the general subject of dental health.

## *Honorary Fraternity*

OMICRON KAPPA UPSILON (1914). A national dental honorary fraternity organized to encourage a high grade of scholarship. Usually three members of the senior class are elected each year on recommendation of the Dean.

## *Postdoctoral Training Opportunities*

### THREE-YEAR POSTDOCTORAL FELLOWSHIPS

The Harvard School of Dental Medicine, in collaboration with the Forsyth Dental Center and the affiliated clinics at the Massachusetts General Hospital and Children's Medical Center, offers a three-year program of advanced postgraduate study intended to prepare a limited number of individuals for careers in academic dentistry. An applicant must be a graduate of high scholastic standing from an accredited

dental school and, on the basis of his interests, accomplishments and recommendations, appear to offer exceptional promise as a future scholar in dentistry.

Highly individualized to meet the needs of the particular student, the objective of the program is to provide training in investigative work in a biological field, advanced experience in the clinical field of choice, and an introduction to teaching. Each Fellow is under the personal sponsorship of one or two staff members whose interests coincide with those of the student. The clinical areas in which training is offered include orthodontics, periodontics, dental medicine and pedodontics. To the extent required for the individual Fellow opportunity for supplementary basic science courses in other departments of Harvard University will be made available. Previous postgraduate training, for example, an internship or residency in one of the associated clinics or equivalent training elsewhere, will be taken into account in planning the individual program.

A certificate is awarded in recognition of successful completion of the program.

The basic stipend for this program is \$5,000 for the first year, \$5,500 for the second, and \$6,000 for the third year; an allowance of \$500 per dependent is also provided.

Applications may be sent at any time up to February 1 to the Director of Postdoctoral Studies at the Harvard School of Dental Medicine. Appointments will usually commence July 1st.

### **DENTAL PUBLIC HEALTH FELLOWSHIP**

The Harvard School of Dental Medicine, in cooperation with the Harvard School of Public Health and the Massachusetts Department of Public Health, offers a two- or three-year program of postdoctoral study intended to prepare a limited number of individuals for full-time careers in dental public health and ecological dentistry.

In the two-year program, the first year is spent at the School of Public Health working towards the degree of Master of Public Health; elective studies may be performed at the School of Dental Medicine. The second year involves residency training in cooperation with the Massachusetts Department of Public Health to meet the requirements of the American Board of Dental Public Health. In the three-year program, the first two years are similar to the two-

## **HARVARD UNIVERSITY**

year program but include advanced didactic work and research training at the School of Dental Medicine. Residency requirements are obtained during the second and third years; in addition, the third year involves research, the preparation of a research thesis, and teaching experience. A Postdoctoral Fellowship Certificate is awarded upon completion.

Further information and application forms may be secured by writing to the Department of Ecological Dentistry, Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, Massachusetts 02115.

## **RESEARCH FELLOWSHIPS**

Opportunities may be available in the departments of the School, Forsyth, or affiliated hospitals to engage in investigation as a Research Fellow under the direction of a member of the department. No university credit toward a degree is given for such work. The title "Research Fellow" is applied to individuals who are "in training" and who are considered to be advanced students. Questions concerning the appointment of Research Fellows should be directed to the professors listed under the various departments.

## **ADVANCED CLINICAL TRAINING**

### **INTERNSHIPS AT THE CHILDREN'S HOSPITAL MEDICAL CENTER**

Annual appointments (two places) for internship at the Children's Hospital Medical Center Dental Department (a Harvard teaching unit) are available. These internships are recognized as part of the requirements for the American Board of Pedodontics. Application forms may be obtained by writing to the Chief of Dental Service, Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Massachusetts, 02115.

### **INTERNSHIPS AT THE MASSACHUSETTS GENERAL HOSPITAL**

Annual appointments are available (two places) for internship on the Dental Medicine Service at the Massachusetts General Hospital. This service is also affiliated with the Harvard School of Dental Medicine. Application forms may be obtained by writing to the

Chief of Dental Medicine Service, Massachusetts General Hospital,  
Fruit Street, Boston, Massachusetts, 02114.

**FELLOWSHIPS AT THE FORSYTH DENTAL CENTER**

Clinical Fellowships in Dental Medicine are appointments for one year which offer the postdoctoral student interested in preparing for a full-time academic career an opportunity to gain experience in basic or clinical research as well as advanced training in pediatric dentistry, restorative dentistry, endodontics, or periodontology. Superior Clinical Fellows or advanced students may be appointed as Research Fellows for one or more years. An extensive graduate lecture program in oral biology, histology and histochemistry, the chemistry of calcified tissues, statistics, growth and development, and experimental pathology is offered by the staff plus numerous local and national guest lecturers. Clinical lectures, seminars, and conferences supplement the series of basic science lectures. Fellows are expected to undertake a research project under the sponsorship and guidance of the staff. Physical facilities, equipment, and supplies are provided by the Center. For further information write to the Director, Forsyth Dental Center, 140 The Fenway, Boston, Massachusetts 02115.

BULFINCH BUILDING, MASSACHUSETTS GENERAL HOSPITAL





## OTHER COURSES FOR DENTAL GRADUATES

*Dental Medicine* 1. Dr. ROY O. GREEP and Associates.

This course is designed for dental teachers, foreign students of special ability, and others who wish to combine clinical study with elective research in the laboratories of the School. Only a very small number of students will be admitted. Curriculum will be designed to meet individual needs and the entire facilities of the School may be utilized. Tuition will be at the rate of \$2,000.

*Basic Science for Oral Surgeons.* Dr. DAVID WEISBERGER and Associates.

This course is designed to meet requirements for the Board in Oral Surgery. It is given at Harvard Medical School, Harvard School of Dental Medicine and at the Massachusetts General Hospital. Students having a one year internship in Oral Surgery and a full course in General Pathology will be given preference. Fee to be determined.

Eight months, October through May; daily except Saturday. Only a very small number of students will be admitted.

*Prosthetic Dentistry.* Dr. RUNE SÖREMARK and Associates.

This course is designed to meet requirements for the Board in Prosthetic Dentistry. Students having completed internships will be given preference. Registration will be limited to a small number of students. The curriculum will be designed to meet individual needs and the entire facilities of the School may be utilized. Fee to be determined.

Eleven months, daily except Saturday.

## HIGHER DEGREES IN THE MEDICAL SCIENCES

The degrees Doctor of Philosophy and Master of Arts have been established for advanced work in special fields in the medical sciences. These degrees are administered by the Faculty of Arts and Sciences, through the Division of Medical Sciences, which consists of faculty members of the preclinical departments of the Faculty of Medicine.

Those who already hold a dental or medical degree are encouraged



to obtain their additional education as postdoctoral fellows (see pp. 38-39), although they may become candidates for advanced degrees if their qualifications for admission are approved and if they are prepared to fulfill such formal course requirements as may be decided by the Division. Students interested in graduate study in the Division should see the General Announcement of the Graduate School of Arts and Sciences and the pamphlet "Higher Degrees in Medical Sciences", available from the Harvard Graduate School of Arts and Sciences, Cambridge, Massachusetts, 02138. Inquiries should be addressed to the Chairman of the Division of Medical Sciences, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts, 02115.

# Announcement of Courses

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## Division of Studies for the First and Second Years

FIRST YEAR		SECOND YEAR	
	HOURS		HOURS
Introduction to the Health Sciences .....	66	Bacteriology .....	168
Gross Anatomy .....	245	Pathology (including Oral Histopathology and Neuro-pathology .....	331
General Histology and Cytology .....	135	Pharmacology .....	120
Cellular Biochemistry .....	87	Pathologic Physiology * .....	538
Circulatory Physiology .....	80	Oral Histology and Patho-physiology .....	15
Respiration, Kidney, and Body Fluids .....	168	Growth and Development: Introduction to Psychopa-thology .....	32
Gastrointestinal and Endocrine Systems .....	168	Pediatrics .....	3
Neurosciences .....	196	Tutorial .....	15
Correlation Clinics .....	64		
Psychic Growth and Develop-ment .....	13		
Biostatistics .....	15		
Tutorial .....	36		

\* A multidepartmental integrated course which includes Case Taking (Medicine and Surgery) and Laboratory Diagnosis.

*Descriptions of courses for the first and second years are abridged. See combined catalogue of the Harvard Medical School and School of Dental Medicine for further particulars.*

## General Plan of the First Two Years

In general, during the first semester of each of the first two years, individual departments introduce selected material characteristic of their particular disciplines. In the second semester of each year, the departments collaborate in the presentation of a unified approach to various problems of human biology.

In the first year, the first semester is devoted to a study of gross anatomy, an introduction to histology and cytology, and to the fundamentals of physiology and biochemistry. During the second semester, the anatomy (macro- and micro-), physiology and biochemistry relevant to studies of the body fluids, respiration, the liver and the kidney, and the nervous, gastrointestinal and endocrine systems are presented in an interdepartmental framework. Three additional exercises complete the material of the first year. Voluntary clinics designed to indicate the application of the basic medical sciences to understanding disease in man are presented at roughly weekly intervals throughout the year. In the second semester, a course in Psychic Growth and Development introduces aspects of normal psychological development in man.

In the first semester of the second year, the Departments of Bacteriology, Pathology and Pharmacology offer courses in their respective disciplines. A number of correlated interdepartmental exercises is also included. The last portion of the semester is devoted to chemotherapy taught jointly by the Departments of Bacteriology and Pharmacology.

During the second semester, a correlated program in pathologic physiology is given during which mechanisms of disease are presented in a unified course by members of the various clinical specialties. In addition, practical instruction in the taking of case histories and physical examinations is given on the wards and out-patient departments of the hospitals at which there are Harvard teaching units. During the second year, a series of lectures develops further concepts of individual psychologic functioning. Emphasis now shifts to the nature and genesis of abnormal psychological mechanisms which result from both social and physical factors and are manifested in symptoms and behavioral disturbances.

INTRODUCTION TO THE HEALTH SCIENCES. *First year.*— *First 2 weeks after Labor Day.* PROFESSOR SHAW. Drs. CARBONE, SWEENEY, WUTHIER and guest lecturers.

In this laboratory and lecture course, selected fundamental concepts learned in college sciences are considered in relation to health and disease in man as demonstrations of the vital relevance of scientific information for the understanding and solving of biological problems by the student and the dentist.

## ANATOMY

DON W. FAWCETT, M.D., *Hersey Professor of Anatomy, James Stillman Professor of Comparative Anatomy, and Head of the Department.*

ROY O. GREEP, PH.D., D.SC. (hon.), *Professor of Anatomy in the School of Dental Medicine.*

EDWARD A. EDWARDS, M.D., *Associate Clinical Professor of Anatomy.*

RICHARD E. COGGESHALL, M.D., *Instructor in Anatomy.*

GORDON J. MACDONALD, PH.D., *Research Associate in Physiology in the School of Dental Medicine.*

ANATOMY A AND B. *First Year.* — The courses of the first year are intended to teach human anatomy, both gross and microscopic, together with the essentials of human embryology and neurology.

In the study of gross anatomy, students make a complete dissection of the human body in the first semester. Four students are assigned to the same subject, and work together during the course. The study of the skeleton is carried on concurrently with the dissection, and each student is provided with a box of bones which may be kept throughout the course. Lectures or demonstrations serve to emphasize the clinical application of gross anatomical relations and to teach certain aspects of human biology not adequately treated in the textbooks. Special dissections made by prosectors from the second year class and various anatomical specimens and preparations are displayed to supplement the student's own dissections. Students are urged to examine these specimens carefully, and to discuss them informally with the instructors.

That part of the course in microscopic anatomy given in the first semester is designed to give the student a familiarity with the normal structure of cells and tissues as they appear under light microscope and with their finer structure as revealed by the electron microscope. The histology presented in the second semester forms a part of the correlative teaching in which the structure, physiology and biochemistry of the major organ systems are studied. Demonstrations of fresh tissue are prepared for examination with phase contrast and interference microscopy, and special cytological and histochemical preparations are displayed to present the broad range of techniques used in morphological investigations.

Embryology is taught in conjunction with histology and gross anatomy in a series of lectures in the first semester.

Neuroanatomical instruction is given as a part of the section of correlative teaching designated "Neurosciences."

Lectures, demonstrations, and laboratory work. Dr. FAWCETT and Staff.

## BIOLOGICAL CHEMISTRY

ELKAN R. BLOUT, PH.D., A.M. (*hon.*), *Edward S. Harbness Professor of Biological Chemistry and Head of the Department.*

EUGENE P. KENNEDY, PH.D., *Hamilton Kuhn Professor of Biological Chemistry.*

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Affiliated:

FINN BRUDEVOLD, D.D.S., *Professor of Dentistry at the Forsyth Dental Center.*

JAMES H. SHAW, PH.D., *Professor of Nutrition in the School of Dental Medicine.*

CHRISTIAN SCHWABE, D.D.S., PH.D., *Associate in Biological Chemistry.*

ROY E. WUTHIER, PH.D., *Associate in Biological Chemistry at the Forsyth Dental Center.*

**BIOLOGICAL CHEMISTRY A. First Year.**—During the first semester the lectures in Biological Chemistry discuss the chemical components of living matter and the metabolic processes common to all tissues. Laboratory work deals with the physical and chemical concepts necessary to an understanding of living processes, and the fundamental chemical characteristics of biological compounds and enzymatic reactions.

During the second semester the lectures and laboratory work in biochemistry are interwoven with those given by the Departments of Physiology and Anatomy. In the first six weeks the Department of Biological Chemistry will deal with the following topics: inorganic chemical composition of body tissues and fluids and physical chemical factors governing their control: the transport of  $O_2$  and  $CO_2$  in the blood and acid-base balance. The gastro-intestinal and endocrine systems will be studied in the second five-week period. The Department will present the chemical processes involved in digestion and absorption; the intermediary metabolism of the liver; the chemistry and metabolism of cholesterol, the bile acids, and the steroid hormones; and the regulatory effects of hormones in general on metabolism. In the third six-week period, which explores the neurosciences, certain

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special aspects of the chemistry and metabolism of brain and nerve are the contributions of the Department of Biological Chemistry.

Lectures and laboratory work. Dr. BLOUT and Staff.

## PHYSIOLOGY

EUGENE M. LANDIS, M.D., PH.D., S.M. (hon.), *George Higginson Professor of Physiology and Head of the Department.*

A. CLIFFORD BARGER, M.D., *Robert Henry Pfeiffer Professor of Physiology.*

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Affiliated:

JAMES T. IRVING, PH.D., M.D., *Professor of Physiology at the Forsyth Dental Center.*

DAVID T. ARMSTRONG, PH.D., *Associate in Anatomy in the School of Dental Medicine.*

STEPHEN S. ROTHMAN, D.D.S., PH.D., *Instructor in Physiology in the School of Dental Medicine.*

MILES A. CRENSHAW, PH.D., *Instructor in Physiology at the Forsyth Dental Center.*

PHYSIOLOGY A. *First Year.*—During the first semester, the lectures of this course are designed to acquaint the student with the fundamental aspects of cardiovascular physiology and to consider in detail those portions of the subject that are essential to an understanding of the phenomena of health and disease in man. By means of laboratory exercises the student is introduced as rapidly as possible to the observational methods and techniques available for studying cardiovascular function in man. Then emphasis is placed upon exercises illustrating in animals the experimental procedures employed for the detailed analysis of function and for the acquisition of a fundamental knowledge of cardiovascular physiology. Conferences and demonstrations supplement the more formal instruction.

During the second semester the lectures and laboratory work in physiology are interwoven with those given by the Departments of Anatomy and Biological Chemistry. In the first five weeks selected topics in renal and pulmonary physiology are presented, with discussion of glomerular filtration, active transport, mechanics of breathing, gas transport and gas exchange in the lungs. The role of the kidneys and lungs in maintaining acid-base balance illustrates the interrelationships of the two systems.



Principles of gastrointestinal physiology and endocrinology are taught in the second five week period. The fate of ingested food-stuffs is described including the secretion of enzymes, digestion in the gastrointestinal tract and absorption of these products of digestion. The functions of the liver are considered, with special emphasis on those related to the secretion of bile. The endocrine regulation of metabolism, growth and reproduction is presented, with laboratory work conducted in small groups. These exercises are designed to illustrate special techniques currently employed in endocrine research.

The third period, duration six weeks, is devoted to neurosciences, beginning with consideration of conduction, excitation and inhibition as physico-chemical events at nerve membranes. The motor systems are surveyed in ascending fashion, beginning with muscles and continuing through the spinal cord and brainstem to the cerebral cortex. Sensory systems are considered with special emphasis on vision. Higher level function, such as sleep and consciousness, are discussed in the final week.

Lectures and laboratory work. Dr. LANDIS and Staff.

## BACTERIOLOGY

BERNARD D. DAVIS, M.D., *Adele Lehman Professor of Bacteriology and Immunology and Head of the Department.*

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Affiliated:

RONALD J. GIBBONS, PH.D., *Assistant Professor of Bacteriology at the Forsyth Dental Center.*

SIGMUND S. SOCRANSKY, D.D.S., *Assistant Professor of Periodontology at the Forsyth Dental Center.*

DWIGHT F. GORDON, PH.D., *Research Fellow in Bacteriology at the Forsyth Dental Center.*

BACTERIOLOGY A. *Second Year.*— This course consists of lectures, laboratory exercises, and conferences, designed to acquaint the student with the principles of bacteriology, virology, immunology, allergy and chemotherapy. The fungi will also be briefly considered.

The first part of the course consists of an introduction to general microbiology, including the structure, physiology, metabolism, and

## HARVARD UNIVERSITY

genetics of bacteria and bacteriophage. Attention will then be given to the agents of infectious disease, with emphasis on properties that are useful in their identification and in understanding their pathogenicity. Exercises on host-parasite relations and allergy will be correlated with pathology, those on chemotherapy will be correlated with pharmacology. Clinics held in various hospitals will introduce the student to infectious disease in man. Considerable attention will also be given to illustrating the use of unicellular organisms in studying problems common to all cells including those of man.

Part of the course, dealing with problems in the field of "oral microbiology," is presented in the form of conferences and laboratory sessions at the Forsyth Dental Center.

Lectures, laboratory work, and conferences. Dr. DAVIS and Staff.

## PATHOLOGY

ARTHUR T. HERTIG, M.D., *Shattuck Professor of Pathological Anatomy and Head of the Department.*

DAVID G. FREIMAN, M.D., *Professor of Pathology at the Beth Israel Hospital.*

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Affiliated:

PAUL GOLDHABER, D.D.S., *Associate Professor of Periodontology.*

**PATHOLOGY A. Second Year.** — The second year course in pathology is planned as a systematic survey of pathology. It consists of lectures, laboratory study of pathologic histology and demonstrations of gross pathologic material, partly from fixed specimens drawn from the Warren Museum, but more extensively from demonstrations of fresh autopsy and surgical material brought from the laboratories of the affiliated hospitals. Students visit the Pathology Laboratories of the Boston City Hospital, Massachusetts General Hospital, Peter Bent Brigham Hospital, Children's Hospital, Beth Israel Hospital, the Free Hospital for Women, the New England Deaconess Hospital, Boston Lying-in Hospital and the South Huntington Avenue Veterans Hospital for participation in performance of autopsies.

Lectures are given three days in the week by the staff. The course is divided roughly, though not sharply, into general and special pathology, covering in the first part of the year basic pathologic processes,

such as tissue injury and repair, inflammation, tissue responses to specific infectious agents and neoplasia. Owing to the revision of the second year curriculum, special pathology is now integrated with the other second year courses and designated as "Pathologic Physiology." Seven organs or systems will be thus considered during the present academic year: hematopoietic system, kidney, cardiovascular system, respiratory system, gastrointestinal system, endocrine system and nervous system. The pathology of the eye and oral cavity are covered in collaboration with other departments of the University.

Lectures and laboratory work. Dr. HERTIG and Associates.

ORAL HISTOLOGY AND PATHOPHYSIOLOGY (Part I).—A seminar and laboratory course devoted primarily to the growth and development of the tooth and surrounding structures and the pathology of these tissues. Special lectures concerning biochemistry, physiology, experimental pathology, and epidemiology are included.

Lectures and laboratory work. Dr. GOLDBERGER and Associates.

## NEUROLOGY AND PSYCHIATRY

RAYMOND D. ADAMS, M.D., *Bullard Professor of Neuropathology and Head of the Department of Neurology at the Massachusetts General Hospital.*

DEREK E. DENNY-BROWN, DR. PHIL., M.D., *James Jackson Putnam Professor of Neurology and Head of the Department at the Boston City Hospital.*

ERICH LINDEMANN, DR. PHIL., M.D., *Professor of Psychiatry and Head of the Department of Psychiatry at the Massachusetts General Hospital.*

PSYCHIATRY. *First Year.*—Normal Growth and Development. The course will focus on the biological roots of behavior with particular attention to the phenomena of emotion and learning. Consideration of the progressive adaptation of the organism in interaction with the environment leads to an introduction to human personality development. This theme is developed further in the second year. The clinics will present patients exemplifying topic areas from the lecture series.

Lectures and clinics. Dr. LINDEMANN and Staff.

PSYCHIATRY. *Second Year.*—The second year consists of nineteen lectures in abnormal growth and development to develop further

## HARVARD UNIVERSITY

concepts of psychological functioning. Emphasis shifts to the nature and genesis of abnormal psychological mechanisms manifested in symptoms and behavioral disturbances. Twelve additional hours are given to introduce methods of history taking and examination of patients designed to understand more fully socio-emotional factors in illness.

Lectures and section teaching. Dr. LINDEMANN and Staff.

NEUROLOGY A. *Second Year*.—Clinical lectures are given at the Boston City Hospital and at the Massachusetts General Hospital to the entire class. The object of the course is to give the student a general knowledge of the principles of diagnosis of diseases of the nervous system.

Clinical lectures. Drs. DENNY-BROWN and ADAMS.

NEUROPATHOLOGY A. *Second Year*.—The course consists of lectures, laboratory work, and demonstrations. The lectures introduce concepts of value in neurology and psychiatry. Microscopical and gross specimens are studied.

Lectures and laboratory work. Dr. ADAMS and Staff.

## PHARMACOLOGY

OTTO KRAYER, M.D. (hon.), *Gustavus Adolphus Pfeiffer Professor of Pharmacology and Head of the Department*.

ARMEN H. TASHJIAN, M.D., *Associate in Pharmacology in the School of Dental Medicine*.

PAUL L. MUNSON, PH.D., *Lecturer on Pharmacology in the School of Dental Medicine*.

PHARMACOLOGY A. *Second Year*.—The course in pharmacology consists of lectures, demonstrations, experimental laboratory exercises and conferences. Concepts of general importance in pharmacology and toxicology are presented and the opportunity is provided for students to become acquainted with important drugs. Emphasis is placed on those actions of pharmacological agents which help in understanding the disordered physiology of disease and which are of importance in the rational treatment of disease. The mode of action of important drugs is discussed. In the laboratory, the student is able to

become acquainted at first hand with some of the experimental facts, obtained from studies on man and animals, which provide the starting points for the analysis of pharmacological effects.

Lectures, laboratory work, and conferences. Dr. KRAYER and Associates.

## MEDICINE

ALEXANDER LEAF, M.D., A.M. (*hon.*), *Jackson Professor of Clinical Medicine and Chief of Medical Services at the Massachusetts General Hospital.*

MAXWELL FINLAND, M.D., *George Richards Minot Professor of Medicine and Head of the Department at the Boston City Hospital.*

HOWARD H. HIATT, M.D., *Herrman Ludwig Blumgart Professor of Medicine and Head of the Department at the Beth Israel Hospital.*

GEORGE W. THORN, M.D., LL.D. (*hon.*), SC.D. (*hon.*), DR. OF MED. (*hon.*), *Hersey Professor of the Theory and Practice of Physic and Head of the Department at the Peter Bent Brigham Hospital.*

PAUL C. ZAMECNIK, M.D., *Collis P. Huntington Professor of Oncologic Medicine, Director of the J. Collins Warren Laboratories of the Huntington Memorial Hospital, and Chairman of the Executive Committee of the Department of Medicine.*

EARLE M. CHAPMAN, M.D., *Assistant Clinical Professor of Medicine.*

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Affiliated:

DAVID WEISBERGER, D.M.D., M.D., *Professor of Dental Medicine.*

MEDICINE A. *Second Year.* — During the second half of the second year, the Department of Medicine in cooperation with the Departments of Pathology, Pharmacology, Surgery and others participates in the teaching of pathologic physiology. The course provides an integrated approach to understanding the basic principles of disease and includes intensive instruction in laboratory methods. Accompanying the instruction in pathologic physiology, a course is given in the study of the patient by history taking and physical examination. For this instruction, the students are divided into small groups and assigned to the four general hospitals.

Lectures and laboratory work. Drs. FREIMAN (Department of Pathology), CHAPMAN and Staff.



## SURGERY

JACOB FINE, M.D., *Professor of Surgery at the Beth Israel Hospital and Head of the Department at the Beth Israel Hospital.*

WILLIAM V. McDERMOTT, JR., M.D., *Professor of Surgery and Head of the Department at the Boston City Hospital.*

FRANCIS D. MOORE, M.D., *Moseley Professor of Surgery and Head of the Department at the Peter Bent Brigham Hospital.*

PAUL S. RUSSELL, M.D., *John Homans Professor of Surgery and Head of the Department at the Massachusetts General Hospital.*

**SURGERY A. Second Year.** — The course is designed to correlate pre-clinical sciences with the basic principles underlying the surgical management of injury and disease. The Department of Surgery joins with the Department of Medicine in a series of exercises in physical diagnosis and laboratory medicine to offer unified instruction in case taking. Practical exercises are offered that introduce the student to basic surgical techniques.

Section work, case taking, lectures and demonstrations on the physical diagnosis of surgical diseases in conjunction with the Department of Medicine. Drs. FINE, McDERMOTT, MOORE, RUSSELL, and Associates.

## PEDIATRICS

CLEMENT A. SMITH, M.D., *Professor of Pediatrics at the Boston Lying-in Hospital and Chairman of the Executive Committee of the Departments of Pediatrics.*

**PEDIATRICS A. Second Year.** — Lectures are given during the second year to familiarize the students with the study of children before they come into contact with patients. In this series are discussed the physiological readjustments of neonatal life, the care of the well child, and the history and physical examination of the sick child.

Clinical lectures. *Second half-year.*

## PREVENTIVE MEDICINE

DAVID D. RUTSTEIN, M.D., *Professor of Preventive Medicine and Head of the Department.*



THEODORE COLTON, S.D., *Associate in Preventive Medicine.*

RITA J. NICKERSON, M.A., *Research Associate in Preventive Medicine.*

**QUANTITATIVE METHODS IN MEDICINE.** First Year.—This introduction to statistical reasoning includes a description of the types of data encountered in medicine and biology, elementary probability theory, problems of sampling and the logical basis for drawing conclusions from evidence.

Students with considerable background in mathematics may, after a qualifying examination, be admitted to a special section of this course in which greater attention will be given to the application of mathematics to biological problems.

Lectures and laboratory work. Dr. COLTON and Staff.

## RADIOLOGY

EDWARD B. D. NEUHAUSER, M.D., *Clinical Professor of Radiology and Head of the Department.*

*First Year.*—Radiological instruction during the first year comprises a series of lectures, during the course in Anatomy, designed to introduce and apply the X-ray method as a means of studying gross internal anatomy in health and disease. The practical application of these methods is extended in the Saturday clinics.

*Second Year.*—During the second semester of the second year, small group exercises and laboratories are conducted in conjunction with the program of correlative teaching, with emphasis on the systemic approach to X-ray interpretation and the correlation of abnormal findings with gross pathology and patho-physiology.



## ***Division of Studies for the Third and Fourth Years***

<i>Course</i>	<i>Hours</i>	
	3rd Year	4th Year
Dental Anatomy	42	
Fundamentals of Occlusion	15	
Genetics and Anthropology	16	
Nutrition	16	
Oral Histopathology	64	
Dental Medicine	40	40
Ecological Dentistry	33	46
Endodontics and Operative Dentistry	420	379
Oral Surgery	50	42
Orthodontics	144	130
Pediatric Dentistry	60	70
Periodontics	113	110
Prosthetic Dentistry	482	583
Research Project Seminars	16	16
Roentgenology	18	20
Clinical Pharmacology		25
Surgical Anatomy of the Head and Neck		59
Emergency Service	9	27

The tabulated hours overleaf indicate the approximate allotment of time for the third and fourth academic years in the School of Dental Medicine.

As the entering classes are limited, it is possible to reduce the time usually involved in formal courses relating to dental techniques. Individual instruction, demonstrations, seminars and conferences replace the traditional lecture system to a large degree.

A recently initiated program to instruct third and fourth year students in effective use of ancillary dental personnel provides experience for each student in the performance of clinical procedures with the aid of a trained dental assistant or hygienist. Auxiliary personnel are also utilized to relieve the student of a variety of routine but time-consuming tasks.

*Dental Anatomy* — 1st semester, 3rd year. Assistant Professors VAN LEEUWEN and NALBANDIAN.

Instruction in dental anatomy and tooth morphology. Special emphasis is placed on individual tooth form and the relationship of the tooth in the dental arch to adjacent teeth, opposing teeth and supporting tissue. Technique practice in reproduction of tooth form is stressed using natural extracted teeth.

*Fundamentals of Occlusion* — 3rd year. Dr. EPSTEIN and Associates.

This course represents a combined effort of many disciplines to provide basic information on the stomatognathic system as a background for an understanding of occlusion.

*Genetics and Anthropology* — 1st semester, 3rd year. Assistant Professor HUNT.

Lectures are given with the purpose of reviewing the principles of genetics, including studies of populations. A brief survey of anthropology is given with major emphasis on evolutionary changes in the head. Dental implications are stressed throughout the course.

*Nutrition* — 3rd year. Professor SHAW and Dr. SWEENEY.

Discussion of relations of nutrition to the development, maturation and maintenance of the oral tissues. Discussion of nutritional requirements, relative values of various foods and the preparation of diet histories. Clinic practice in the evaluation of diet histories and in the development of suitable recommendations for the patient.

*Oral Histopathology* — 3rd year. Associate Professor GOLDHABER; Drs. NALBANDIAN, STERN, STONE and KALIS.

The course consists of weekly two-hour sessions composed of lectures, laboratory and student reports on the literature. The subject matter includes the histology and pathology (light microscopy and electron microscopy) of teeth and pulp, periodontium, oral mucosa, salivary glands and bone. Attempts are made to correlate the microscopic picture with the clinical findings. Emphasis is placed on experimental pathology.

*Dental Medicine* — 3rd and 4th years. Professor WEISBERGER; Drs. CHRISTMAN, ROSENBERG, KIMBALL, and CARBONE.

A course devoted to the diagnosis and treatment of oral diseases, i.e., diseases of the periodontium, dental pulp, oral mucosa and other oral structures together with their correlation to systemic conditions. Lectures, seminars, clinical practice and observation are given both in the School Dental Clinic and at the Massachusetts General Hospital. Assignments in Dental Medicine are also made at the Peter Bent Brigham Hospital.

Infirmiry procedures, identification of oral structures, methods of oral examination, history taking, and common methods of diagnosis for dental and oral disease are given in both years, supplemented by practice in the general clinic.

*Ecological Dentistry* — 3rd and 4th years. Professor DUNNING and Associate Clinical Professor GLASS; Drs. GIDDON and WELLOCK of the School of Dental Medicine; Drs. BALDWIN, and HUNT of the Forsyth Dental Center; Drs. SCHMIDT, PENCHANSKY and YOUNG of the School of Public Health; and Dr. KING of the University Health Services.

The goal of this Department is to relate dentistry to the environment in which dental diseases occur and in which dentists must work. The teaching program of the Department includes application of statistical methods to the problems of dental disease in population groups, the place of various types of disease prevention, the relation of the dentist to society, and the scope of dentistry in comprehensive health service.

In the third year, the course begins with material on behavior problems of patients, especially children. Next comes a section on

biostatistics, a continuation from material presented earlier. Preventive dentistry, epidemiology of dental disease, and the educational, cultural and organizational problems of dental public health programs occupy the rest of the year. Visits are made to a fluoridation installation and a health center. Caries control procedures are carried out with selected clinic patients. Following this year's instruction, the student makes a survey of the health resources in a community of his choice.

In the fourth year, psychosocial problems in dentistry are taken up first. Then comes material on organization and financing of dental care programs, dental practice management, ethics and jurisprudence. Interview techniques and further caries control procedures are carried out with clinic patients.

*Endodontics* — 3rd and 4th Years. Drs. MATUSOW, WINOGRAD and Associates.

In the third year, the student acquires a clinical interpretation of pulpal and periapical disease, with a rationale for root canal therapy. Fundamental concepts in pathology, bacteriology, and other pre-clinical sciences are correlated with the course. Basic endodontic procedures are introduced through lectures, laboratory techniques, and clinical demonstrations prior to the treatment of patients.

In the fourth year, clinical experience is amplified with lectures, seminars, and case discussions. More complex endodontic procedures, in addition to periapical surgery, are introduced.

Throughout the course, the integration of endodontics with related dental disciplines is emphasized. The student obtains a perspective of the subject as a part of the total oral health picture.

*Operative Dentistry* — 3rd and 4th years. Assistant Professor NALBANDIAN, Drs. THOMPSON, ETHERINGTON, VAN LEEUWEN, DOGON, BAILEY, BARSH, HAYNES, MATUSOW, SOWLES and WINOGRAD.

Throughout the two-year course, emphasis is placed upon early student-patient contact with immediate clinical application of treatment procedures. In the third year, instruction is given in oral hygiene and the clinical aspects of caries and other dental diseases. By way of lectures, demonstrations, and individual chairside discussions, the student develops proficiency in examination, diagnosis and treatment planning. Most of the current techniques of cavity preparation



utilizing conventional and high speeds are given, in conjunction with study of the various types of restorative materials.

In the fourth year, gold foil restorations are taught; some recently developed procedures are introduced and clinical practice in all phases of operative dentistry continues.

*Oral Surgery* — 3rd and 4th years. Professor WEISBERGER; Associate Clinical Professor GURALNICK, Drs. DEWILDE, BOOTH, CHRISTMAN, LINCOLN, MINER, WHITE and AGRANAT; Dr MIXTER of the Medical School.

Early in the third year the students receive instruction in the basic operative techniques of general and oral surgery at the surgical laboratories of the Massachusetts General Hospital. These preliminary exercises are followed by lectures, seminars and clinical practice of oral surgery and anesthesiology at the School of Dental Medicine clinic.

In the fourth year students are assigned to the Massachusetts General Hospital as clinical clerks on the Dental Service. At the hospital more extensive surgery of the oral cavity including traumatic injuries to the face and jaws is observed. The student takes active part in the study and treatment of such cases. Additional training in oral surgery is made available at the Boston City Hospital.

*Orthodontics* — 3rd and 4th years. Professor MOORREES; Drs. A. M. GRØN, LEAR, LEBRET, SWANSON, and DOUGLAS.

The treatment of patients with different occlusal anomalies, in collaboration with postgraduate Fellows, provides a means to become thoroughly familiar with clinical aspects of orthodontics during the third and fourth years. This experience adds a measure of perspective for the theoretical part of the course that consists of lectures, seminars and diagnostic conferences. Emphasis is placed on growth and development, cephalometrics, as well as specific phases of genetics, biostatistics, anthropology and histology. Clinical demonstrations and laboratory technique exercises serve to enhance comprehension of treatment procedures. Patients are obtained from the Forsyth Dental Center, while the cleft palate clinic of the Children's Medical Center will collaborate in the teaching efforts. The over-all objective of the course in orthodontics is to develop sound judgment as a basis for diagnosis and care of children in clinical practice.

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*Pediatric Dentistry* — 3rd and 4th years. Associate Professor LOSCH; Drs. BRADLEY, BUDDE, C. G. COHEN, HOOVER, PETERSEN, SWEENEY, WATSON, WATTON and YEN.

Lectures and demonstrations introduce the subject in the third year with emphasis on the physical and psychological development of the child. During the pedodontic clinic, the student practices routine dental care for children. Treatment planning and an understanding of dental development are stressed.

The fourth year student continues to practice in the pedodontic clinic. Lectures and clinic procedures now stress the preventive aspects in children's dentistry, especially patient and parent education in oral hygiene and personal caries control as well as space maintenance, correction of oral habits and tooth guidance.

In addition, the senior student visits the Dental Department of The Children's Hospital Medical Center where he is exposed to the management of the unusual cases best seen in a hospital atmosphere, as well as observing dental rehabilitation procedures performed by the hospital dental staff in the main operating rooms. Special emphasis is given those patients whose systemic disease includes oral manifestations.

*Periodontics* — 3rd and 4th years. Associate Professor GOLDBABER; Drs. EPSTEIN, NALBANDIAN, STERN, FASCIANO, KALIS, MILLER and STONE.

The student is taught to recognize and diagnose periodontal disease and to comprehend its pathogenesis. He is expected to understand the role of local etiological factors as well as the part played by systemic disease in modifying tissue response to local irritations.

With regard to therapy, emphasis is placed on the elimination of local factors and the institution of preventive procedures. In addition, he is taught the principles of occlusal equilibration and splinting of loose teeth. All students are required to perform periodontal surgery.

*Prosthetic Dentistry* — 3rd and 4th years. Visiting Professor SÖREMARK; Drs. EHRLICH, FARRELL, ATWOOD, FISHMAN, GOLD, GOLDIN and KUSHNIR.

Prosthetic dentistry which includes complete, fixed and removable prosthesis is taught in the third and fourth years. Through lectures, conferences and demonstrations the student receives clinical and lab-

oratory instruction in the anatomy and physiology of the mouth as it applies to prosthetic dentistry, and in the materials and techniques of prosthetic restoration directed toward oral health, function and aesthetics. Every effort is made to provide early clinic contacts and to teach techniques on clinic cases. The high teacher-student ratio, small classes, and special physical facilities favor this type of instruction.

*Research Project* — 3rd and 4th years. Assistant Professor WELLS and others.

In order to gain a more realistic appreciation of the nature of scientific research, all students of the Harvard School of Dental Medicine, as a requirement for graduation, participate in a laboratory or clinical investigation of their own choosing. By the end of the first semester of the third year, the student has chosen a research supervisor from the faculty and the subject to be investigated. He presents a plan for his research project in the form of a seminar at the beginning of the second semester. During the rest of the third year, and in some cases during the summer months, he attempts to master the techniques necessary for his work. During the fourth year, with the advice and aid of the faculty research supervisor, the project is carried forward, and at the end of the year, the student presents a seminar summarizing his results. Both the third- and fourth-year seminars are also required in written form for permanent reference in the Library.

*Roentgenology* — 3rd and 4th years. Visiting Professor SÖREMARK and Dr. DEWILDE.

Principles of applied roentgenology and the interpretation of radiographs, with consideration of the electro-physical basis of roentgenology, are covered in the third year. Practice in radiological technique and interpretation is given in both years.

*Surgical Anatomy of the Head and Neck* — 4th year elective offered to selected students for two full weeks in February. Associate Clinical Professor GURALNICK and Dr. EDWARDS from the Medical School.

The course is designed primarily to enable the student through his own dissections to gain knowledge of the anatomy of operative oral surgery.



The first week is spent in doing eight regional dissections. The second week is devoted to performing specific surgical procedures with emphasis on anatomical dissection. The laboratory exercises are supplemented by lectures and by the use of motion pictures.

Eligibility for admission is determined by the Fourth Year Promotion Board to whom application should be made by letter prior to December first of the senior year.

### ***Courses Offered to Medical Students by the School of Dental Medicine***

Opportunities for voluntary and elective work are available at the School of Dental Medicine for third and fourth year medical students. Course material will be designed to meet individual needs where possible. Instruction will be on a tutorial basis. Make all inquiries at the Dean's Office, School of Dental Medicine.

30. *Diagnosis of Oral Diseases.* Dr. WEISBERGER and Associates. *November and December*, Monday through Friday 10 A.M. to noon at the M.G.H. Dental Clinic. Open to third and fourth year students as a voluntary course. Limited to three students.



## Students 1965-1966

### FOURTH YEAR CLASS (1966)

- |   |  |
|---|--|
| Atikian, Hrair, A.B. ( <i>New York Univ.</i> ) 1962.<br>Binder, Robert Edward, B.S. ( <i>Northeastern Univ.</i> ) 1960.<br>Bowen, Charles Raymond, A.B. ( <i>Susquehanna Univ.</i> ) 1962.<br>‡Cotmore, John Mason ( <i>Temple Univ.</i> )<br>Gittleman, Lawrence Marvin, A.B. ( <i>Rutgers Coll.</i> ) 1962.<br>Gordon, George David, A.B. ( <i>Bowdoin Coll.</i> ) 1961.<br>Gracia, Robert Manuel, A.B. ( <i>Coll. of Holy Cross</i> ) 1962.<br>Manasek, Frank John, A.B. ( <i>New York Univ.</i> ) 1961.<br>Mulvihill, James Edward, A.B. ( <i>Coll. of the Holy Cross</i> ) 1962.<br><br>Robinson, Jiles Leslie, Jr., A.B. 1962.<br>Siegel, Carl Leonard, A.B. ( <i>Lafayette Coll.</i> ) 1962.<br>Stanley, Robert Louis, A.B. ( <i>Coll. of the Holy Cross</i> ) 1962.<br><br>Wing, Kenneth Richmond, A.B. ( <i>Wesleyan Univ.</i> ) 1962. | Boonton, N. J.<br>Hyde Park<br>Selinsgrove, Pa.<br>London, England<br>Miami Beach, Fla.<br>Belmont<br>New Bedford<br>Bronx, N. Y.<br>Wethersfield, Conn.<br>Washington, D. C.<br>New York, N. Y.<br>Brooklyn, N. Y.<br>Cranston, R. I. |
|---|--|

### THIRD YEAR CLASS (1967)

- |  |   |
|--|---|
| Anapolle, Steven Eric, B.A. ( <i>Boston Univ.</i> ) 1963.<br>Bailes, Charles Seiler, A.B. ( <i>Susquehanna Univ.</i> ) 1956; [Hahnemann Medical Coll.]<br>Balaban, Stuart James, B.S. ( <i>New York Univ.</i> ) 1963.<br>Dick, Douglas Shelton, B.A. ( <i>Yale Univ.</i> ) 1963.<br>Donoff, Robert Bruce, B.S. ( <i>Brooklyn Coll.</i> ) 1963.<br>‡Elias, Arthur Charles ( <i>Brandeis Univ.</i> ).<br>Goldberg, Norman Leon, B.A. ( <i>Brandeis Univ.</i> ) 1963.<br>Hilzenrath, Stephen Sidney, B.A. ( <i>Brandeis Univ.</i> ) 1963.<br>Hirschman, Richard Davis, B.A. ( <i>Brooklyn Coll.</i> ) 1963.<br>Knoettner, Philip Val, B.A. ( <i>Dartmouth Coll.</i> ) 1963.<br>Mopsik, Edward Robert, B.S. ( <i>Queens Coll.</i> ) 1963.<br>Mosadomi, Hezekiah Adeyemi, B.S. ( <i>Mt. Union Coll.</i> ) 1962; [Univ. of Rochester].<br>Perkell, Joseph Shailer, B.S. ( <i>Massachusetts Inst. of Technology</i> ) 1962;<br><br>Rowan, Michael Edward, A.B. 1963.<br>‡Sande, David Lewis ( <i>Univ. of North Dakota</i> ). | Newton Centre<br>Williamsport, Pa.<br>New York, N.Y.<br>Wellesley Hills<br>Brooklyn, N.Y.<br>Westbury, N.Y.<br>Newton<br>New York, N.Y.<br>Brooklyn, N.Y.<br>Bedford, N.H.<br>Forest Hills, N.Y.<br>Osogbo, Nigeria<br>Coral Gables, Fla.<br>Wellesley Hills<br>Grand Forks, N.D. |
|--|---|

‡ Admitted on basis of three years' college work.



Scharke, Clifford Craig, A.B. (*New York Univ.*) 1963. Jamaica, N.Y.  
 Super, Stuart, B.A. (*New York Univ.*) 1963. Brooklyn, N.Y.

## SECOND YEAR CLASS (1968)

Cashion, Paul David, A.B. (*Coll. of the Holy Cross*) 1964. Roslindale  
 Cote, Donald Eugene, B.S. (*Coll. of the Holy Cross*) 1964. Rockland  
 §Dinnerman, Peter Michael (*Univ. of New Hampshire*) Portsmouth, N.H.  
 Flamm, Martin Benjamin, A.B. (*Columbia Univ.*) 1964. New York, N. Y.  
 ‡Frank, Robert Allen (*Queens Coll.*) Flushing, N. Y.  
 ‡Goff, Paul Henry (*Fairleigh Dickinson Univ.*) Plainview, N. J.  
 ‡Goldstein, Gary Stephen (*Univ. of Connecticut*) Norwalk, Conn.  
 Maron, Sheldon Steven, B.S. (*Boston Coll.*) 1964. Revere  
 ‡Roser, Steven Malcolm (*Middlebury Coll.*) West Newton  
 Seldin, Edward Bert, B.S. (*Tufts Univ.*) 1964. New York, N. Y.  
 ‡Trauring, Charles Maurice (*Columbia Univ.*) New York, N. Y.  
 §Walling, Marlin Worth (*Sacramento State Coll.*) Sacramento, Calif.

## FIRST YEAR CLASS (1969)

Altman, Leonard Charles, B.A. (*Univ. of Pennsylvania*) 1965. Flushing N. Y.  
 ‡Baer, Warren Sheldon (*Boston Univ.*) Woburn  
 ‡Bauer, Reginald Alexander (*Univ. of California at Los Angeles*)  
 Los Angeles, Calif.  
 ‡Breyan, David Edward (*Boston Univ.*) West Roxbury  
 Evans, Bruce Eugene, A.B. (*Williams Coll.*) 1965. Portland, Me.  
 Foord, William Dennis, B.S. (*Wesleyan Univ.*) 1965. Garden City, N. Y.  
 Haddad, Raymond David, B.A. (*Univ. of New Hampshire*) 1965. Methuen  
 Hymoff, Richard Steven, B.A. (*Brandeis Univ.*) 1965. Brookline  
 Isenstadt, Lester, B.S. (*Boston Univ.*) 1964. Cambridge  
 ‡Kaban, Leonard Bruce (*Queens Coll. of The City Univ. of New York*)  
 Flushing N. Y.  
 Kallio, Donald Michael, A.B. (*Coll. of the Holy Cross*) 1965. Worcester  
 ‡Leaf, Robert Jay (*Cornell Univ.*) Harrison, N. Y.  
 Piecuch, Joseph Francis, B.A. (*Univ. of Massachusetts*) 1965. Indian Orchard  
 ‡Rothman, Kenneth Jay (*Colgate Univ.*) Long Beach, N.Y.  
 Shay, Norbert James, Jr., B.S. (*St. Bonaventure of Siena Coll.*) 1965.  
 Menands, N. Y.  
 Weiner, Allan Lewis, B.A. (*Yeshiva Univ.*) 1965. Wintthrop

‡ Admitted on basis of three years' college work.

§ Admitted on the basis of four years' college work.

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	—
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## ***Suggested Form for Gifts or Bequests***

The suggested form for bequests to benefit dental education and research at Harvard is as follows:

"I give (all the rest, residue and remainder) (. . . . dollars) to the President and Fellows of Harvard College, a Massachusetts educational, charitable corporation, for the benefit of the Harvard School of Dental Medicine."

Such an unrestricted bequest for the School would be set up as a separate fund or added to an existing general endowment fund for the purposes of the school, depending on its size. If circumstances permit, it would be well to consult University authorities before drafting any detailed plan for a specified purpose. Further information may be secured from Eugene G. Kraetzer, Jr., Recording Secretary, Harvard University, 225 Franklin Street, Boston, Massachusetts, 02110 or from the Office of the Dean, School of Dental Medicine.





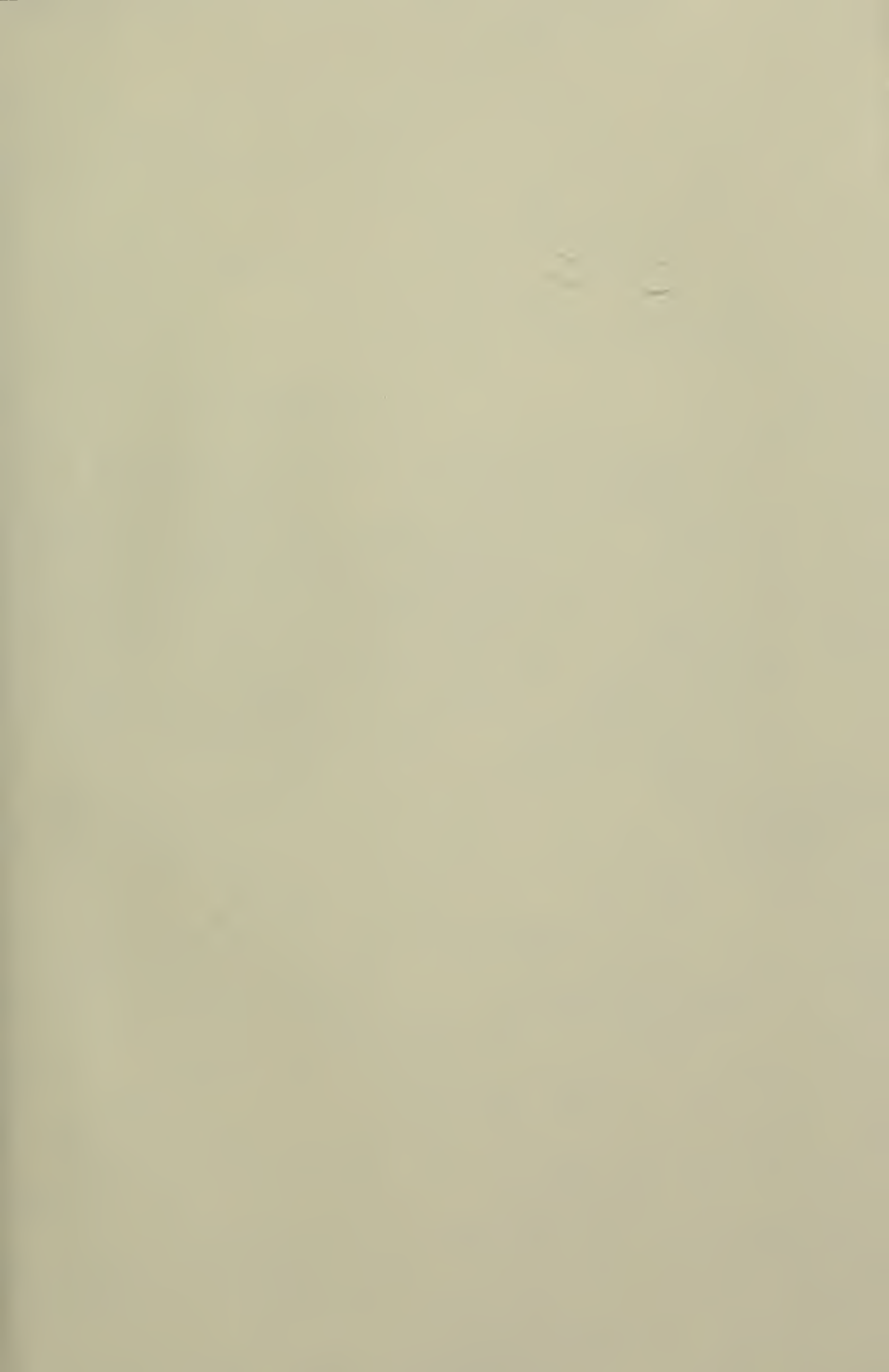




## ACADEMIC CALENDAR FOR 1966-67

<i>Monday, July 4, 1966</i>	Independence Day: a holiday
<i>Monday, September 5</i>	Labor Day: a holiday
<i>Tuesday, September 6</i>	Academic year begins for 1st year class Registration and beginning of academic year for 3rd and 4th year classes
<i>Monday, September 12</i>	Registration for 2nd year class
<i>Tuesday, September 13</i>	Academic year begins for 2nd year class
<i>Friday, September 16</i>	Registration for 1st year class
<i>Wednesday, October 12</i>	Columbus Day: a holiday
<i>Friday, November 11</i>	Veterans' Day: a holiday
<i>Thursday, November 24</i>	Thanksgiving Day: a holiday
<i>December 18, 1966- January 2, 1967</i>	Recess for all classes
<i>Tuesday, January 17</i>	Second half year begins for 2nd year class
<i>January 30-February 4</i>	Examination period for 1st year class
<i>Monday, February 6</i>	Second half year begins for 1st year class
<i>Wednesday, February 22</i>	Washington's Birthday: a holiday
<i>Monday, April 3</i>	Last day for receiving applications from candi- dates for the D.M.D. degree in June 1966
<i>March 12-19</i>	Recess for 3rd and 4th year classes
<i>April 16-23</i>	Recess for 1st and 2nd year classes
<i>May 8-12</i>	Examination week for 4th year class
<i>Saturday, May 27</i>	Class Day for the Class of 1967
<i>Tuesday, May 30</i>	Memorial Day: a holiday
<i>June 5-10</i>	Examination period for 2nd year class
<i>Saturday, June 10</i>	Second half year ends for 1st year class
<i>Thursday, June 15, 1967</i>	Commencement









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